Contents of Volume 189, No. 1

Peptide and Protein Structure

The quarternary structure of an unusual high-molecular-weight intracellular haemoglobin from the bivalve mollusc *Barbatia reeveana*	N. P. GRINICH & R. C. TERWILLIGER	1–8
The binding of human complement component C4 to antibody antigen aggregates	R. D. CAMPBELL, A. W. DODDS & R. R. PORTER	67–80
Polymeric *C*-terminal cross-linked material from type-I collagen. A modified method for purification, anomalous behaviour on gel filtration, molecular weight estimation, carbohydrate content and lipid content	N. D. LIGHT & A. J. BAILEY	111–124
Purification of the pyruvate dehydrogenase multienzyme complex of *Bacillus stearothermophilus* and resolution of its four component polypeptides	C. E. HENDERSON & R. N. PERHAM	161–172
Subunit structure of *Vicia graminea* anti-(blood-group N) lectin	M.-J. PRIGENT & R. BOURRILLON	185–188

Enzymes and Enzyme Kinetics

The interrelations between high- and low-molecular-weight forms of normal and mutant (Krabbe-disease) galactocerebrosidase	Y. BEN-YOSEPH, M. HUNGERFORD & H. L. NADLER	9–15
Degradation of fructose-1,6-bisphosphate aldolase by cathepsin B. A further example of peptidyldipeptidase activity of this proteinase	J. S. BOND & A. J. BARRETT	17–25
Bile salt activation of cerebroside sulphate sulphohydrolase	A. L. FLUHARTY, R. L. STEVENS, R. T. MILLER & H. KIHARA	45–49
The isolation, purification and properties of the cellobiohydrolase component of *Penicillium funiculosum* cellulase	T. M. WOOD, S. I. MCCRAE & C. C. MACFARLANE	51–65
Calmodulin affinity chromatography yields a functional purified erythrocyte (Ca^{2+} + Mg^{2+})-dependent adenosine triphosphatase	K. GIETZEN, M. TEJČKA & H. U. WOLF	81–88
Complexing reverse transcriptase with polyspermine–ribonuclease	A. K. BANDYOPADHYAY, D. WANG & C. C. LEVY	89–93
Purification and enzyme stability of alcohol dehydrogenase from *Drosophila simulans*, *Drosophila virilis* and *Drosophila melanogaster adh*^{s}	E. JUAN & R. GONZÁLEZ-DUARTE	105–110
Light modulation of the activity of protochlorophyllide reductase	R. E. MAPLESTON & W. T. GRIFFITHS	125–133
The presence and longitudinal distribution of the glutathione *S*-transferase in rat epididymis and vas deferens	B. F. HALES, C. HACHEY & B. ROBAIRE	135–142
Cyclic nucleotide-independent protein kinases bound to cytoplasmic and nuclear polyribosomes in non-infected and adenovirus-infected HeLa cells	M. H. SARMA & N. K. CHATTERJEE	143–152
Isolation of rat submandibular kallikreins by using immuno-adsorption chromatography	K. M. GAUTVIK, L. JOHANSEN, K. SVINDAHL, K. NUSTAD & T. B. ØRSTAVIK	153–159
The human complement system: assembly of the classical pathway C3 convertase	M. A. KERR	173–181
Evidence that the active centre of chymopapain A is different from the active centres of some other cysteine proteinases and that the Brønsted coefficient ($\beta_{nuc.}$) for the reactions of thiolate anions with 2,2,'-dipyridyl disulphide may be decreased by reagent protonation	K. BROCKLEHURST, B. S. BAINES & M. S. MUSHIRI	189–192

Metalloproteins

Zinc-, copper- and cadmium-binding protein in Ehrlich ascites tumour cells — J. KOCH, S. WIELGUS, B. SHANKARA, L. A. SARYAN, C. F. SHAW & D. H. PETERING — 95–104

Membranes

A procedure for membrane–protein reconstitution and the functional reconstitution of the anion transport system of the human-erythrocyte membrane — J. M. WOLOSIN — 35–44

Physical Biochemistry

Studies on the mechanism of binding of serum albumins to immobilized Cibacron Blue F3G A — R. J. LEATHERBARROW & P. D. G. DEAN — 27–34

General Methods

Highly purified agarose as stacking gel in sodium dodecyl sulphate/polyacrylamide-gel electrophoresis — B. AASTED — 183–184

Contents of Volume 189, No. 2,

Peptide and Protein Structure

Circular dichroic, infrared and other studies on the protein component of pig brain thromboplastin — R. M. HOWELL & H. REZVAN — 209–218

The binding of calmodulin to myelin basic protein and histone H2B — R. J. A. GRAND & S. V. PERRY — 227–240

Phosphorylated and other modified forms of eukaryotic ribosomal protein S3 analysed by two-dimensional gel electrophoresis — D. P. LEADER — 241–245

On the biological role of a proteolytic-enzyme inhibitor from the ectoparasitic tick *Boophilus microplus* — P. WILLADSEN & G. A. RIDING — 295–303

Identification and characterization of microtubule proteins from myxamoebae of *Physarum polycephalum* — A. ROOBOL, C. I. POGSON & K. GULL — 305–312

Polypeptide heterogeneity of hamster and calf fibronectins — S. D. J. PENA, G. MILLS, R. C. HUGHES & J. D. APLIN — 337–347

Effects of storage on activity and subunit structure of rabbit skeletal-muscle AMP deaminase — M. RANIERI-RAGGI & A. RAGGI — 367–368

Enzymes and Enzyme Kinetics

Isolation and some properties of troponin T kinase from rabbit skeletal muscle — N. B. GUSEV, A. B. DOBROVOLSKII & S. E. SEVERIN — 219–226

Isolation of lysyl hydroxylase, an enzyme of collagen synthesis, from chick embryos as a homogeneous protein — T. M. TURPEENNIEMI-HUJANEN, U. PUISTOLA & K. I. KIVIRIKKO — 247–253

Binding of anhydrotrypsin to α_2-macroglobulin — C. A. SAYERS & A. J. BARRETT — 255–261

The ribonucleases of bovine skeletal muscle — G. E. DAVIES, T. P. KARPETSKY & C. C. LEVY — 263–275

Use of polynucleotide/polyacrylamide-gel electrophoresis as a sensitive technique for the detection and comparison of ribonuclease activities — T. P. KARPETSKY, G. E. DAVIES, K. K. SHRIVER & C. C. LEVY — 277–284

Properties of pig synovial collagenase — J. A. TYLER & T. E. CAWSTON — 349–357

A rapid method for the isolation of ribonuclease from yeast (*Saccharomyces carlsbergensis*) — J. K. SHETTY, R. C. WEAVER & J. E. KINSELLA — 363–366

Effect of hydrogen peroxide on spinach (*Spinacia oleracea*) chloroplast fructose bisphosphatase — S. A. CHARLES & B. HALLIWELL — 373–376

GENERAL BOOKBINDING CO.
81 2
46AA 013 1 c 2066
QUALITY CONTROL MARK

The separation and purification of rat liver UDP-glucuronyltransferase activities towards testosterone and oestrone	P. J. WEATHERILL & B. BURCHELL	377–380
Solubilization of UDP-glucose-specific starch synthetase in sweet-potato (*Ipomoea batatas*) starch granules by the urea/pullulanase method	T. SASAKI & K. KAINUMA	381–383
Metalloproteins		
Electron paramagnetic resonance studies on *Pseudomonas* nitrosyl nitrite reductase. Evidence for multiple species in the electron paramagnetic resonance spectra of nitrosyl haemoproteins	M. K. JOHNSON, A. J. THOMSON, T. A. WALSH, D. BARBER & C. GREENWOOD	285–294
Nucleotides, Nucleic Acids and Nucleoproteins		
Physicochemical characterization of the ribosomal RNA species of the mollusca. Molecular weight, integrity and secondary-structure features of the RNA of the large and small ribosomal subunits	P. CAMMARANO, P. LONDEI, F. MAZZEI & A. FELSANI	313–335
Carbohydrates and Complex Carbohydrates		
A rapid enzymic procedure for the determination of picomole amounts of UDP-glucuronic acid	J. SINGH, L. R. SCHWARZ & F. J. WIEBEL	369–372
Physical Biochemistry		
The combination of the viscosity increment with the harmonic mean rotational relaxation time for determining the conformation of biological macromolecules in solution	S. E. HARDING	359–361
General Methods		
Preparation and properties of crystalline biliverdin IXα. Simple methods for preparing isomerically homogeneous biliverdin and [^{14}C]biliverdin by using 2,3-dichloro-5,6-dicyanobenzoquinone	A. F. MCDONAGH & L. A. PALMA	193–208

Contents of Volume 189, No. 3

Peptide and Protein Structure		
Interactions of basic polypeptides and proteins with calmodulin	T. ITANO, R. ITANO & J. T. PENNISTON	455–459
The covalent nature of the human antithrombin III–thrombin bond	M. O. LONGAS & T. H. FINLAY	481–489
The assembly of tetrameric prolyl hydroxylase in tendon fibroblasts from newly synthesized α-subunits and from preformed cross-reacting protein	R. A. BERG, W. W.-Y. KAO & N. L. KEDERSHA	491–499
Influence of *N*-terminal acetylation and *C*-terminal proteolysis on the analgesic activity of β-endophin	J. F. W. DEAKIN, J. O. DOSTROVSKY & D. G. SMYTH	501–506
Degradation of protein disulphide bonds in dilute alkali	T. M. FLORENCE	507–520
The electrophoresis of transferrins in urea/polyacrylamide gels	R. W. EVANS & J. WILLIAMS	541–546
Size heterogeneity of rat pituitary prolactin	M. WALLIS, M. DANIELS & S. A. ELLIS	605–614
Enzymes and Enzyme Kinetics		
Stereospecificity of hepatic L-tryptophan 2,3-dioxygenase	Y. WATANABE, M. FUJIWARA, R. YOSHIDA & O. HAYAISHI	393–405

Analysis of progress curves. Rate law of pyruvate kinase type 1 from *Escherichia coli*	M. MARKUS, T. PLESSER, A. BOITEUX, B. HESS & M. MALCOVATI	421–433
Human cathepsin B. Application of the substrate *N*-benzyloxycarbonyl-L-arginyl-L-arginine 2-naphthylamide to a study of the inhibition by leupeptin	C. G. KNIGHT	447–453
Indoleamine 2,3-dioxygenase. A new, rapid, sensitive radiometric assay and its application to the study of the enzyme in rat tissues	J. S. COOK, C. I. POGSON & S. A. SMITH	461–466
Biochemical studies on a case of feline mannosidosis	L. J. BURDITT, K. CHOTAI, S. HIRANI, P. G. NUGENT, B. G. WINCHESTER & W. F. BLAKEMORE	467–473
The extraction of a neutral metalloproteinase from the involuting rat uterus, and its action on cartilage proteoglycan	A. SELLERS & J. F. WOESSNER,JR.	521–531
Partial purification and properties of a transamidinase from *Lathyrus sativus* seedlings. Involvement in homoarginine metabolism and amine interconversions	K. S. SRIVENUGOPAL & P. R. ADIGA	553–560
The kinetics of effector binding to phosphofructokinase. The binding of Mg^{2+}–1,N^6-ethenoadenosine triphosphate to the catalytic site	D. ROBERTS & G. L. KELLETT	561–567
The kinetics of effector binding to phosphofructokinase. The influence of effectors on the allosteric conformational transition	D. ROBERTS & G. L. KELLETT	569–579
Crystallization and characterization of human liver kynurenine–glyoxylate aminotransferase. Identity with alanine–glyoxylate aminotransferase and serine–pyruvate aminotransferase	E. OKUNO, Y. MINATOGAWA, M. NAKAMURA, N. KAMODA, J. NAKANISHI, M. MAKINO & R. KIDO	581–590
Proteins of the kidney microvillar membrane. Aspartate aminopetidase: purification by immunoadsorbent chromatography and properties of the detergent- and proteinase-solubilized forms	E.M. DANIELSEN, O. NORÉN, H. SJÖSTRÖM, J. INGRAM & A. J. KENNY	591–603
Oxygen-17 splitting of the Very Rapid molybdenum(V) e.p.r. signal from xanthine oxidase. Rate of exchange with water of the coupled oxygen atom	S. GUTTERIDGE & R. C. BRAY	615–623
Study of dogfish (*Scyliorhinus caniculus*) deoxyribonucleic acid polymerase α and β. Extraction, separation, characterization and changes during spermatogenesis	M. PHILIPPE & P. CHEVAILLIER	635–639
Inhibition of protohaem ferro-lyase by *N*-substituted porphyrins. Structural requirements for the inhibitory effect	F. DE MATTEIS, A. H. GIBBS & A. G. SMITH	645–648
Lack of deviation from Michaelis–Menten kinetics for pig heart fumarase	B. ANDERSEN	653–654
Thermodynamic studies on the hydrolysis of cytidine 2′:3′-phosphate by bovine pancreatic ribonuclease A. A possible effect of the change of the structure of water	J. A. BIOSCA & C. M. CUCHILLO	655–657
Metalloproteins		
Do photosynthetic bacteria contain cytochrome c_1?	P. M. WOOD	385–391
Formation of super-reduced *Chromatium* high-potential iron–sulphur protein in aqueous solution by pulse radiolysis	J. BUTLER, A G. SYKES, G. V. BUXTON, P. C. HARRINGTON & R. G. WILKINS	641–644
Lipids		
Configuration and interactions of the polar head group in gangliosides	B. MAGGIO, F. A. CUMAR & R. CAPUTTO	435–440
Absolute configuration of dolichol	W. L. ADAIR, JR. & S. ROBERTSON	441–445

Membranes

Phospholipid asymmetry in rough- and smooth-endoplasmic-reticulum membranes of untreated and phenobarbital-treated rat liver — I. C. BOLLEN & J. A. HIGGINS — **475–480**

Carbohydrates and Complex Carbohydrates

Quantitative analysis of neutral glycosphingolipids from human lymphocyte subpopulations — G. A. SCHWARTING — **407–412**

Effects of freezing on the estimated amounts of Tamm–Horsfall glycoprotein in urine, as determined by radioimmunoassay — A. A. GOODALL & R. D. MARSHALL — **533–539**

Interaction of lipoprotein lipase with native and modified heparin-like polysaccharides — G. BENGTSSON, T. OLIVECRONA, M. HÖÖK, J. RIESENFELD & U. LINDAHL — **625–633**

Carbohydrate composition of oligosaccharide units of the haemagglutinin from the Hong Kong influenza variant A/Memphis/102/72 — C. W. WARD, P. A. GLEESON & T. A. DOPHEIDE — **649–652**

Physical Biochemistry

Investigations into the effect of acid on the spectral and kinetic properties of purple membrane from *Halobacterium halobium* — M. E. EDGERTON, T. A. MOORE & C. GREENWOOD — **413–420**

Charge-transfer complexes of some linear conjugated polyenes — B. MALLIK, K. M. JAIN & T. N. MISRA — **547–552**

INDEXES

Author Index — **659–660**

Subject Index — **661–665**